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DIAGNOSTIC IMPORTANCE OF EXAMINATIONS OF THE URINE.

AN ADDRESS DELIVERED BEFORE THE MIDDLESEX SOUTH DISTRICT MEDICAL SOCIETY,
AT WALTHAM, APRIL 20, 1864, BY ALFRED HOSMER, M.D., OF WATERTOWN.

[Communicated for the Boston Medical and Surgical Journal.]

MR. PRESIDENT AND GENTLEMEN OF THE MIDDLESEX SOUTH DISTRICT MEDICAL SOCIETY,—Much to my regret, I find myself authorized by the Society's vote to inflict upon you the ordinary ceremony of an annual address. I trust you come here with reasonable expectations, or rather with no expectations at all. I take it for granted, that at this time and place, you do not await the results of independent personal observations, as declared in the announcement of some new discovery, or in the promulgation of some plausible and attractive theory which may explain phenomena hitherto mysterious, or associate in a new, but obvious and rational relation, isolated and apparently disconnected facts. Fortunately for my inevitable short-comings, novelty and originality are admitted not to be characteristic of such productions as this; and the narrow limits of my resources will compel you to listen to that with which you are already thoroughly familiar. But if we cannot increase our knowledge by the addition of what is new, by an undoubted acquisition, it is not impossible for us to reinforce and strengthen it, by reviewing, reviving and renewing what we have once learned, but more or less completely forgotten.

With us, advancing years and enlarging experience fill the mind with the higher and broader truths and principles of science; a process which strongly tends to the obliteration, or rather inadvertent forgetting of the smaller facts and lesser details, the elements, so to speak, which once constituted the whole stock of our knowledge, and were the foundation on which was based all its actual or possible increase. Hence it may prove really profitable to consider with a little more of care and thought than is usually bestowed upon it, a subject which you may deem common-place, and which ought, you

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may say, to be fully comprehended even by junior students still rejoicing in the supposed, but untried and unproved attractions of medicine, and rapidly attaining that consciousness and conviction of omniscience, so often begotten in immature minds by elementary studies.

The functions of a medical practitioner, regarded simply in his professional relations, may be distributed under three heads; viz., the diagnosis, the prognosis, and the treatment of disease. It were almost superfluous for me to assert what has been stated so often with such force and emphasis as to forbid contradiction, and to command the ready assent of all men of the least genuine, honest scientific pretension; viz., the incalculable and paramount importance of diagnosis, correct diagnosis, complete—pathological and therapeutical. That skill in diagnosis is the real power of the physician, we have abundant and convincing evidence in the fact that all men who are truly eminent, all who are considered strong men in the profession, are those who can see what they look at, who can appreciate symptoms, and recognize disease, as by a ready and rapid intuition; those, in short, who possess marked diagnostic ability. "*He is a great physician,*" says Dr. Jacob Bigelow, "*who, above other men, understands diagnosis.*"

A reliable and satisfactory diagnosis made, we abandon a position perplexed by doubt and uncertainty; we stand in the clear and unmistakable light of positive knowledge; we no longer hold opinions, in so far as the term implies and includes anything of conjecture, but we know, and what is better, we are self-assured that we know.

With such knowledge, prognosis ceases to be merely making a guess which has not more than an even chance of not being wrong; it assumes the character of a logical process, and enjoys the probability of being intrinsically correct, and not accidentally coincident with the issue of a case.

It may be speciously claimed that, in a limited sense at least, prognosis should take the precedence of diagnosis, because an unprofessional person, of his own unaided observation and judgment, can verify or falsify predictions made with reference to the future course and termination of disease now in progress. The fact we admit as self-evident, remembering at the same time that questions of diagnosis can be settled by professional authority alone; that their decision cannot be criticised and revised by non-medical parties; that such questions often lose their interest by reason of a recovery; that they are often placed beyond the possibility of finding out by a *post mortem* forbidden; that the careless and imperfect autopsy of an observer, not unprejudiced, may only confirm him in erroneous opinions to which he is already committed. The fallacy of such reasoning is apparent when we reflect that popular reputation is not the measure or the synonyme of professional worth and strength; that a man has no standing who does not stand well in the estimation of

the members of his own profession; that he can hold no rank beyond what is accorded by them, who alone are competent to judge his qualifications and determine his merits.

It is but the repetition of a truism to say that correct diagnosis is absolutely indispensable to scientific, judicious, successful treatment; it is the corner-stone of the system of rational medicine so-called; without it, our experience, if the word can be allowed at all in such a connection, is worthless, and can never in the least degree enrich the science or improve the art of therapeutics; without it, the experience accumulated, and appropriate methods of treatment recommended by others, predecessors, or contemporaries, are entirely lost to us; they are unavailable, because our ignorance renders them inapplicable.

The opportunity and facility which diagnosis alone can furnish for the study and knowledge of the history of individual diseases, is an obvious point which I need not dwell upon.

If diagnosis, then, is a matter of such vital importance, errors of diagnosis cannot be of little moment. Strict justice, however, and a becoming regard for professional credit, require us to admit that there are unavoidable errors, while we must lament the existence of another class which are the necessary and legitimate result of careless observation. Unavoidable errors may occur, if a diagnosis be attempted in cases of some new, anomalous, unheard-of and undescribed lesion. They may also occur when a disease fails to express itself by the distinctive combination and succession of symptoms commonly attending, and taken to be characteristic of it; when it simulates another disease, or when it is accompanied by some unusual and exceptional symptoms, which exist as an inexplicable peculiarity in the case, or as the result of some unsuspected complication. The laws and rules of diagnosis presuppose and depend upon a tolerable uniformity and regularity in the modes and effects of the pathological processes of nature, who "is under a tacit contract of probability to always do as she has already done;" and physicians are no more accountable and responsible for the irregular and capricious manifestations of morbid action, than a surgeon would be for some unexpected deviation from ordinary anatomical structure, which should defeat the purpose of an operation commonly successful. Errors, temporarily unavoidable, may occur if a diagnosis be prematurely made in those cases in which disease is still in an incipient stage, before it has had time to complete its own expression by the development of intelligible and easily interpreted symptoms. Whose senses are keen enough, whose sagacity shrewd enough, by direct exploration or indirect inference, to discover and declare the commencing malignant growth in the liver, for instance, which in time shall double the weight of the organ? or the incipient unsymmetrical dilatation of the aorta, which dooms the patient finally to a fatal hæmorrhage by the bursting of an aneurism? or

the deposit of the first tubercular atoms in the lungs, which by subsequent growth and aggregation shall disable or destroy a large portion of the pulmonary tissue? or the earliest deterioration of structure, and fatty transformation of tissue, in the heart, which at a later date shall produce sudden death, the cause of which might easily be overlooked in an ordinary autopsy?

Thus briefly of the unavoidable errors of diagnosis. Let us now pass to those which originate in careless observation. To mistake an undoubted luxation of the shoulder, and call it a sprain; to consider an obvious fracture of the cervix femoris a contusion; to call membranous croup ulcerated sore throat; to designate as neuralgia a case of large internal abscess freely discharging pus into the urinary passages, and attended by well-marked constitutional symptoms; to find the intermittent, expulsive pains of an abortion, amenable to, and controlled by, the anodyne influence of invisible and imponderable doses of belladonna; to attach to a case of confluent smallpox the innocent and unsuspecting designation of a non-contagious cutaneous affection; to declare that an elderly person dying with obvious pneumonia is sinking from old age and debility; to overlook an extensive hydrothorax, and attribute the attending cough and dyspnoea to a "cold": such mistakes as these prove those who commit them to be grossly careless and culpable, and convict them of no small degree of incompetence. Circumspect, cautious, careful observation will surely prevent such errors, and save the physician from the disgrace, and the patient from the detriment and damage, resulting therefrom.

But to terminate a long preface, which I hope you will not consider altogether irrelevant, I ask your attention to what more immediately concerns us to-day, viz.—the importance and utility of examinations of the urine in deciding questions of diagnosis.

Dr. John Ware, in his admirable lectures on General Therapeutics (Boston Medical and Surgical Journal, Vol. LXIV., p. 130), says:—"A hasty, an indifferent or a random mode of investigation may lead us to overlook symptoms that are not prominent—that are even latent—and yet should have an important bearing on our judgment. Such, among many examples, are the presence of sugar or albumen in the urine. They do not obtrude themselves on the attention either of the patient or the physician, they are latent; they must be sought for at the expense of a little trouble. But in reality they are each often the key to the character of the case in which they appear, and decide its result. *Their detection will serve to clear up what was before a vague and promiscuous mass of symptoms.*"

Although the whole truth of the matter is so succinctly stated by such undeniable authority, and although a quotation so pertinent might seem sufficient to save me the trouble of proceeding any farther, you will pardon me if I attempt to expand the subject a little, and place it in the strongest possible light by a special discussion of its details.

As the excretion under consideration is the direct product of renal action, it would seem to be the more easy and natural course to first inquire to what extent observation of the condition of the urine will enable us to detect disease of the kidneys, the pathological interest of which organs may be inferred from their physiological importance. A hasty comparison will show that these organs, for reasons both anatomical and physiological, stand in a peculiar relation to the ordinary means and modes of exploration. In the case of the thoracic and many of the abdominal viscera, a morbid condition may be unequivocally indicated by an appreciable change in some organ, in respect of its form, size, density, or position, which change is readily discovered by palpation or percussion. The character of the contents of the chest, resonant or non-resonant, will declare itself by no uncertain or doubtful sound to him who but once asks the question of density with his fingers' ends. Disease of the liver, of the uterus, or the ovary, may almost obtrude and force itself on the attention, by enlarging the organ, altering its form, and in a certain sense changing its position by extending its natural limits. Disease, also, may be distinctly indicated by the derangement and disturbance of functions that are mechanical, or by the production of sensations, painful or otherwise, in connection with the action of organs of which there is ordinarily no knowledge or consciousness. We all know how pneumonia or pleurisy will modify the respiratory movements; how hypertrophy of the heart will increase the force of its impulse; how gastric digestion and peristaltic action may be attended with great discomfort; how defecation may produce extreme suffering. Moreover, it often happens that a single look, as at the rusty sputa of pneumonia, or the coffee-ground vomitus of cancer of the stomach; at the clay-colored stools of jaundice, or the bloody and slimy discharges of dysentery, will tell at once the disease with which we have to deal. Lesions in the cranial cavity, though often obscure and beyond the reach of direct investigation, may give rise to the most marked and unmistakable signs of disordered cerebral action. What can be more apparent than an effusion of blood in the brain, producing paralysis, partial or general, complete or incomplete, and suspending intellectual manifestations?

In a general sense, the kidneys, from their concealed and inaccessible situation, cannot be made the subject of direct tactile examination. There are two exceptions to this. There is the case of movable kidney, a natural curiosity which I have been fortunate enough to meet with once, in which in certain positions of the body, the organ is displaced so far forwards that it can be grasped by the hand through the abdominal walls. But no benefit is likely to be derived from this rare and exceptional condition, as the chances are altogether against the coincidence of renal disease and this peculiar mobility of the organ in the same individual. And besides, in many important affections of the kidney, there is no very considerable

change of size or form, certainly not to the same degree as is found in the liver, uterus or ovary.

The second exception is to be found in the case in which the organ, from cystic or cancerous disease, or large puriform accumulations, actually forms an abdominal tumor. Yet even here, with the advantage of direct manual examination, diagnosis is admitted by Dr. Bright to be extremely difficult, and often incorrect. The conditions under which the secretion of urine goes on, in health and disease, render it impossible for us to have any idea or knowledge either of the normal process or the deviations therefrom. The urine, too, may abound in a morbid element, indicative of active, progressive, fatal disease, and yet, without the application of appropriate chemical tests, present no appearance whatever suggestive of an unhealthy condition. From these facts I think it must be evident that in numerous cases the only means we have of determining whether there is disease of the kidney or not, is to examine the urine; and, as you no doubt already understand, I refer more particularly to cases of albuminuria.

The necessity of the examination to which I allude will appear all the more urgent when we reflect upon the results of clinical observation, which show that in these cases the symptoms consist of various disturbances in portions of the system quite remote from the seat of the fundamental difficulty; that there is nothing about them which, of any necessity, would be likely to suggest their renal origin to an inexperienced observer; that, on the contrary, they may completely divert the attention from their cause, and occupy it fully with effects, which, to be sure, may not be of small magnitude or little importance; that such disease may remain for a certain period latent, or at last suddenly declare itself by the development of some consecutive, secondary disease, so obvious and well-pronounced that it cannot be overlooked, and sufficiently serious, even if it had occurred as a primary affection in a subject otherwise sound, to explain the fatal terminations which are so likely to take place.

I doubt not you will all acquiesce in the correctness of my views. Still I think it will not be inappropriate or uninteresting if I attempt to illustrate and substantiate what I have said, by the introduction of cases of which I have had personal knowledge.

The subject of the first case was a gentleman, aged 68, all whose antecedents seemed eminently favorable for prolonged life and uninterrupted health. He first consulted me May 10th, 1858, on account of certain disorders of the digestive organs. He complained of a disagreeable taste in his mouth, with a thickly coated tongue, unnatural thirst, occasional nausea, and unusual constipation, together with some uncomfortable sensations about the head, which increased or diminished according as the bowels were more or less sluggish. In a month the patient returned, saying that he had experienced temporary relief from my prescription, but that he had relapsed, and

was then suffering from his old symptoms in a somewhat aggravated form. As before, transient benefit followed treatment, but the remedies once satisfactory in their action failed, ere long, to produce the desired effect, and late in the month of July (23d) I was called to the patient, and seriously asked why he did not get well; if any incurable malady rendered recovery impossible. The closest interrogation, and the most careful and thorough physical exploration did not discover any organic disease. There was no dropsy; there was neither anæmic decoloration nor icteric or cachectic discoloration, nor did these symptoms ever appear. The pulse was unchanged in frequency; the countenance so nearly natural that his friends and family declared he could not be seriously ill. As on former occasions, he laid particular stress on the digestive derangements, the coated tongue, bad taste in the mouth, nausea and constipation, which to his mind fully explained the loss of strength, the slight emaciation, and mental inaptitude which he had observed in his case. As to the urinary organs, the patient thought he voided rather more urine than was natural, and knew that he was somewhat annoyed by intolerance of the bladder. In these things there was nothing very significant, but when I tested the urine by heat and nitric acid, I discovered that I had a well-marked case of albuminuria. The albumen, thus found, explained all that had preceded, and proved the true character of the case beyond all possible doubt. But to the sequel; the case went on, the condition of the patient varying somewhat from day to day, but the unfavorable changes, of course, predominating, until August 28th, when the patient had a well-marked apoplectic seizure early in the day, and died the same evening. At the autopsy, I found a pair of granulated kidneys, diminished in size by atrophy of the cortical substance.

The case is instructive, and scarcely requires any comment. It is easy to conceive how the albuminuria and the renal disease it indicated could have been overlooked; how the disturbance of the functions of the alimentary canal could have been considered primary; how the apoplectic attack could have been regarded as an accidental, intercurrent affection, having no connection with the other symptoms, and being in this case, as it may sometimes be, the sole cause of sudden death. But the albuminuria, by the morbid renal condition that it implied, explained perfectly all the other symptoms, and by combining and associating them with itself, gave unity to the case.

[To be continued.]

THE Paris Hospital Medical Society propose the following subject for the Phillips prize of 1000 francs:—"Establish by means of positive facts the prophylaxis and curability of the form of meningitis termed 'tubercular.'" Essays to be written in French.

Reports of Medical Societies.

ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION.—From the full report of the Proceedings, published in the *New York Medical Times*, we condense the following, which circumstances prevented us from giving our readers last week.

The list of officers, elected for the next year, which was incorrectly printed in a portion of our last edition, is as follows:—*President*, Dr. N. S. Davis, of Illinois. *Vice Presidents*, Drs. W. H. Mussey, Ohio; Worthington Hooker, Conn.; William Wheelin, Ind.; Dr. F. E. B. Hintze, Maryland. *Secretary*, Dr. G. Furman, New York. *Treasurer*, Dr. Caspar Wister, Pa.

After some matters of incidental business, the President appointed the following Committee to examine all voluntary communications:—Drs. A. B. Palmer, H. F. Askew, S. G. Hubbard.

Dr. Cyrus Ramsay, N. Y., moved that the regular order of business be suspended, and that the proposed amendments of the Constitution be taken up; which was carried, and the following amendment introduced:—

Amendment of the Constitution in relation to Permanent Secretary.—It is hereby ordered that Article 4, Sec. 1, of the Constitution be amended as follows:—From the 2d line strike out the words "two Secretaries," and insert "one Permanent and one Assistant Secretary;" and in the 5th line, after the word "officer," insert the words "except the Permanent Secretary;" also add to the same section the following: "the Permanent Secretary shall hold his appointment for ten years, unless sooner removed by death, resignation, or a vote of two thirds of the members present at a regular annual meeting."

And be it further ordained that Section 5 of the same article be stricken out, and the following substituted in its place, viz.: "The Permanent Secretary shall record the minutes and authenticate the proceedings, give due notice of the time and place of each next ensuing annual meeting; notify all members of Committees of their appointment and of the duties assigned to them; hold correspondence with other permanently organized medical societies, both domestic and foreign; serve as a member of the Committee on Publication; see that the published Transactions are promptly delivered to all the members who have paid their annual assessment, and carefully preserve the Archives and unpublished Transactions of the Association.

The Assistant Secretary shall aid the Permanent Secretary in recording and authenticating the proceedings of the Association; serve as a member of the Committee of Arrangements, and perform all the duties of Permanent Secretary temporarily, whenever that office shall be vacant either by death, resignation, or removal.

And be it further ordained, that to Article 6, Section "second," be added after the word "meetings," in the second line, the following, viz.: "including the necessary expenses of the Permanent Secretary in maintaining the correspondence of the Association."

After reading the amendments, Dr. Jewell, of Pennsylvania, moved to strike out from the last clause, "attending the regular meetings," which motion was adopted.

Dr. Nebinger, Pa., moved to strike out the word "ten" in the second paragraph, and substitute "five;" which was lost.

Dr. Griscom moved to strike out all that related to a specified term of years.

The previous question being called for and sustained, the amendment of Dr. Griscom was carried.

The question recurring on the adoption of the proposed amendments as amended, it was finally carried in the affirmative.

The Association then adjourned until 10, A.M., of the day following, June 8th.

Wednesday, June 8th.—Morning Session.

The Association was called to order by the President, N. S. Davis, at 10, A.M.

On motion, the following gentlemen were elected permanent members:—Drs. Brown-Séquard, Boston, Mass.; Jno. P. Gray, State Lunatic Asylum, Utica, N. Y.

The reports of the Standing Committees were next called for in regular order, and referred to their appropriate sections.

Treasurer's Report.—The report of the Treasurer, Dr. C. Wister, showed a balance on hand of \$449.02. Only about 120 copies of volume xiv. have been sold during the past year.

Report on Compulsory Vaccination.—Dr. Jas. F. Hibbard, Chairman of the Committee on Compulsory Vaccination, read a report in which it was contended that the adoption of the measure was impracticable, concluding with the following resolutions:—

Resolved, That a committee of be appointed to supervise and control, under the direction of this Association, all matters pertaining to general vaccination.

Resolved, That a committee of be appointed in each State to superintend the measure in its State, which committee shall be subordinate, auxiliary, and advisory, to the Central Committee.

(Signed)

JAS. F. HIBBARD, *Chairman.*

WILSON JEWELL.

JNO. H. GRISCOM.

Adopted, and referred to the section on Public Health.

Dr. A. K. Gardner, of New York, offered a preamble and resolutions, declaring that medicines and medical and surgical instruments and appliances ought not to be considered contraband of war, and that the common interests of humanity, as well as the special interests of Northern soldiers in Southern captivity require that, under proper restrictions, they should be allowed to be conveyed, under flag of truce, within the lines of the rebel States. On motion, the consideration of the resolutions was indefinitely postponed.

Increase of Rank and Pay of Medical Staff of Army and Navy.—Dr. C. C. Cox offered a resolution to increase the rank and pay of medical officers of the army and navy.

Dr. Frank H. Hamilton urged the passage of the resolution by some well-timed and appropriate remarks, after which the question was put and carried unanimously.

The Chair appointed a committee, composed of the following gentlemen, to report upon the same, and prepare a memorial for the action of Congress:—Drs. McGugin, Iowa; Antisell, Washington, D. C.; F. H. Hamilton, N. Y., and Askew, of Delaware.

The Association then adjourned until 10, A.M., of Thursday, June 9.

The afternoon was occupied in the meeting of the different sections.

Thursday, June 9th.—Morning Session.

The Association was called to order by the President shortly after 10, A.M.

Surgeon C. C. Cox, Chairman of the Committee appointed to memorialize the President of the United States in reference to the increase of rank and pay of medical officers of the army and navy, moved that Dr. Charles S. Tripler be added to that Committee, and be appointed Chairman of the same. Carried.

Time of next Meeting.—On motion of Dr. Askew, of Delaware, it was agreed that the time for the next meeting of the Association should be on the first Tuesday of June, 1865.

Reports of Standing Committees.—The reports of the Standing Committees were again called for, with the following results:—

Committee on Insanity.—Dr. R. Hills, of Ohio, the Chairman of the Committee, in a note addressed to the Association, reported progress and asked for further time, promising an elaborate report if such a privilege were granted.

It was then carried that the time should be extended; and on motion of Dr. Griscom, Dr. E. H. Van Duser, the Medical Superintendent of the State Lunatic Asylum, Kalamazoo, Mich., was added to the Committee.

Committee on Prize Essays.—The Chairman of the Committee not being present, the calling for the report was deferred.

Report of Sections.—Dr. S. W. Butler, of Philadelphia, the Chairman of the Section on Medical Topography and Epidemic Diseases, presented a report, which was adopted in full, and the following gentlemen were appointed as members of the Committee to carry out the spirit of the resolutions appended to the report of the Committee on Compulsory Vaccination:—Drs. A. N. Bell, Brooklyn; J. P. Loines and H. D. Bulkley, N. Y.; A. Nebinger, Philadelphia; and J. P. Hibbard, Ind.

Report on the Practical Workings of the U. S. Law relating to the Inspection of Drugs and Medicines.—Dr. Squibb, the Chairman of the Committee on the Practical Workings of the U. S. Drug Law, made a statement to the effect that the gentlemen who composed that Committee could not agree upon the report prepared for their action; and, inasmuch as at the time it was presented for their consideration there was not opportunity for an interchange of views upon the subject, they respectfully request that, as a Committee, they should be discharged.

On motion of Dr. Gardner, the report of the Committee was accepted and the Committee discharged.

Dr. Squibb then proceeded, by invitation, to present his views upon the subject, in the form of a voluntary communication. He contended that the practical working of the law was to all intents and purposes a dead letter, and that the Secretary of the Treasury had not acted upon the earnest solicitations of the Committees from the different Societies and Colleges in New York who had been appointed to memorialize him upon the subject, but had made an appointment without qualifications, which could be ascertained at the time, or which have since been manifested in the duties of the office, since drugs of very inferior quality were constantly passed through the Custom House. As an example he instanced several articles, among which were those

of jalap and scammony, which were, on examination, found to contain a very small per cent. of active principles—much below that which the law prescribes. He threw out the suggestion that, considering the facts of the appointment of the present inspector, it would be of little use to make any further requests to the appointing power.

In conclusion, he stated that he alone was responsible for the statements contained in the paper, and that Dr. Bowditch, one of the Committee, declined to sign a report which he considered of a partisan character, reflecting upon the officers of the General Government at the present time. Dr. Carson, the other member of the Committee, did not wish, as a matter of principle, to sign a paper until he was satisfied, from personal observation, that all the statements therein contained were correct.

After some discussion, the report of Dr. Squibb was accepted, after which—

Dr. S. R. Percy, of New York, remarked that Dr. Squibb had labored under a false impression in making the statements contained in the paper; and further stated that the appointment of Drug Inspector was made by Secretary Chase in perfect good faith, and with the conviction that it would meet the end for which such an appointment was designed. That gentleman had made diligent search for the right man, and, as the result of very numerous recommendations from reliable men of the profession, had selected the present incumbent. Concerning the honesty of the present Inspector, Dr. Percy was prepared to vouch, from a personal knowledge of that gentleman's character, and he could confidently assert that every endeavor had been made to discharge the duties of the responsible office with fidelity. Every specimen that it was possible to examine was carefully examined before it was allowed to pass, and he could not conceive upon what foundation Dr. Squibb had made his assertions. In conclusion, he did not think it came within the province of the Association to endorse any stigmas made against any one; and, as a friend to the Inspector, he felt that it was his duty publicly to defend him.

Dr. Squibb remarked that he was not acquainted with the Inspector, and did not allude to any one by name, but he merely had presented facts which came to his knowledge, leaving the members to draw their own inferences. He only referred to the two articles, scammony and senna, stating that he had examined specimens of the former article which contained as low as 15 per cent. of the active principle, instead of 70; and of the latter article, which contained from 10 to 55 per cent. of sticks and stones, and which in that condition had passed the Custom House.

A motion was made to refer the paper to the Committee on Publication, with discretionary power, which was lost.

Dr. Curry, of Westchester Co., spoke at some length against the general practice of referring papers to the Publishing Committee, urging as an argument against it that many communications would find their way into the volume which would not be entitled to it, and thought that the Committee should have ample discretionary power in the matter. He did not wish it to be understood that his remarks referred to Dr. Squibb's paper, but only wished the principle of the thing to be discussed.

The President stated that the discretionary power belonged to the

section to which any paper might be referred, and suggested the propriety of referring Dr. Squibb's paper to the Section on Chemistry.

Dr. McFarland, New York, thereupon made a motion to refer it to that section, which was carried.

Report of Section on Practical Medicine and Obstetrics.—Dr. Storer, Boston, read a report of the meeting of the Section held the afternoon before, and concluded the same by presenting the following resolutions, which were appended to his paper, and which we have already alluded to :—

Resolved, That in the opinion of the American Medical Association it is expedient that there should be attached to every public hospital for the insane, one or more consulting physicians, whose appointment should be honorary, and who may be consulted at the discretion of the superintendent, such measure being alike for the interest of the hospital, its medical officers, and its patients.

Resolved, That a copy of the above resolutions be transmitted to the Board of Trustees of each of our public hospitals for the insane, and also to the Secretary of the Association of American Superintendents for the Insane, and request that it may be endorsed by that body, the action proposed being upon the respective boards with which its members are officially connected.

Dr. Griscom contended that the Association, by passing these resolutions, would prevent any medical man who should be so appointed from receiving any remuneration. He thought that the physician should be paid for his services, if he chose to make an arrangement to that effect with the managers of the institution; but if he was disposed to accept it as an honorary position, the matter was of course only a personal one. These being his views, he moved that the clause, "whose appointment should be honorary," be stricken out.

Remarks were made endorsing Dr. Griscom, by Drs. Gardner, New York, McCarty, Ill., and others.

The amendment was then carried, after which the resolutions were passed upon as a whole.

The report of the Section was also adopted.

Election of a Permanent Secretary.—Dr. Griscom moved the adoption of a resolution to the following effect :—

Resolved, That the Permanent Secretary shall be entitled to the compensation of _____ dollars per annum, payable out of any surplus funds of the Association after all other claims for each current year shall be paid.

Considerable discussion here followed as to the propriety of adopting the resolution and the amount of remuneration to be offered, when it was finally agreed to lay the matter on the table.

Completion of Report of Committee on Nominations.—The Committee on Nominations then presented the completion of their report, as follows :—

Committee on Exsection and its Connections with Conservative Surgery (enlarged)—Drs. Sayre, N. Y., G. W. Morris, Pa., G. O. Blackman, O., S. H. Tewksbury, Me., E. Andrews, Ill., George B. Twitchell, N. H., J. C. Hughes, Iowa, G. Clymer, U. S. N., J. R. W. Dunbar, Md., R. H. Gilbert, U. S. A.

On Drainage and Sewerage of Large Cities and their influence on Public Health.—Drs. W. J. C. Duhamel, D. C., E. C. Baldwin, Md., Cyrus Ramsay, N. Y.

On Alcohol and its Relations to Man.—Dr. G. E. Morgan.

On Microscopic Observations in Cancer-Cells.—Leonard J. Sanford, Conn.

- On Quarantine (continued).
 On Medical Ethics.—Drs. J. A. Murphy, Ohio, M. L. Linton, Mo., B. F. Schenck, Pa., Swain Wickersham, Ill., A. J. Fuller, Me.
 On the Microscope.—Dr. James M. Corse, Pa.
 On Relations which Electricity sustains to the Causes of Disease.—Dr. S. Little, Pa.
 On the Morbid and Therapeutic Effects of Mental and Moral Influences.—Dr. A. B. Palmer, Mich.
 On the Cause of Extinction of the Aboriginal Races of America—(continued).
 On the Causes and Treatment of Un-united Fractures.—Dr. F. H. Hamilton, N. Y.
 On Diphtheria.—Dr. Lucius Clark, Ill.
 On the Uses and Abuses of Pessaries.—Dr. Jas. B. White, N. Y.
 On International Medical Ethics.—Drs. J. Baxter Upham, Mass., E. Thompson, Ohio, G. Shattuck, Mass., G. C. E. Weber, Ohio.
 On Climatology and Epidemic Diseases.—Drs. C. W. Parsons, R.I., P. A. Stackpole, N. H., T. M. Logan, Cal., R. C. Hamill, Ill., J. C. Weston, Me., B. H. Ostlin, Conn., O. L. Allen, Vt., T. Antisell, Washington, D. C., J. W. H. Baker, Iowa, Abraham Sager, Mich., O. S. Mahon, Md., J. W. Russell, Ohio, D. F. Condie, Pa., H. Townsend, N. Y.
 On Autopsies in Relation to Medical Jurisprudence.—Dr. T. C. Finnell, N. Y.
 On so-called Spotted Fever.—Dr. J. J. Levick, Pa.
 On the Introduction of Disease by Commerce and the Means for its Prevention.—Dr. A. N. Bell, N. Y.
 Permanent Secretary American Medical Association.—Dr. Wm. B. Atkinson, of Philadelphia.
 Assistant Secretary.—Dr. H. R. Storer, of Boston.
 On Patent Rights and Medical Men.—Drs. David Prince, Ill., Thos. Antisell, D. C., and Stephen Smith, N. Y.
 The report, after much discussion in relation to the election of the Secretary, was finally adopted.
 It was moved that a Committee be appointed to report at the next meeting on the Ligature of the Subclavian Artery. Adopted, and the following gentlemen selected as that Committee:—Drs. Willard Parker, N. Y., Armsby, Albany, Norris, Philad., and Mussey, Cincinnati, O.
Report of Prize Committee.—The prize was awarded to Dr. S. Fleet Speir, for an Essay on the Pathology of Jaundice.
 The Association then adjourned until 4, P.M.

Thursday, June 9th.—Afternoon Session.

The Association was duly called to order by the President.

Dr. C. C. Cox submitted the following resolution:—

Resolved, That a Committee of three, consisting of Dr. T. L. Smith, of New York, Dr. Wilson Jewell, of Pennsylvania, and Dr. B. F. Bache, U.S.N., be appointed to memorialize Congress upon the subject of the attempted wrong to the Medical Corps of the Navy, as indicated by a widely circulated protest of the line officers of that branch of the service, against the very moderate increase of rank given to medical officers by a General Order of the Department of the 13th of March, 1863, which increase in rank by no means corresponds in extent to the advancement in rank of the officers of the line thus protesting.

The following resolutions were also offered and adopted:—

By Dr. Raphael, N. Y.

Resolved, To amend the fourth article of the Constitution so as to insert after the word ticket (fifth line) the words, "except in case of the President, who shall be nominated and elected by ballot in open session of the Society, the member receiving a majority of all the votes cast to be declared elected."

Dr. Duhamel, Washington, D. C.:—

Resolved, That the members of the American Medical Association tender their thanks to the gentlemen of the medical profession of the city of New York for the hospitality and civilities extended to them during their stay here.

Resolved, That we also tender our thanks to Mayor Gunther and the gentlemen of the public institutions, who have extended to the members of the Association much kindness and attention.

Dr. McGugin:—

Resolved, That the Committee appointed for the purpose of drafting a suitable bill to be presented to Congress for its consideration and adoption on the subject of the relative rank of medical officers of the army be, and they are hereby instructed to embrace in its provisions a further separation of the Medical Department from the commanding officers of the line, in order to have a more perfect and unrestrained control of its interests and greater efficiency in that branch of the service.

Also by Dr. McGugin:—

Resolved, That each member of the Association is hereby earnestly requested to furnish to the Chairman, or any member of the Standing Committees appointed to report upon the subject assigned them, at the next annual meeting, all facts in his possession, and his experience touching the subject matters upon which said Committee are required to report.

Dr. Palmer, Mich.:—

Resolved, That, as the representatives of the profession of the country, meeting at the moment when the greatest military collision of modern times is at its acme, producing almost unprecedented numbers of wounded and suffering men, calling for the greatest skill and devotion, imposing the deepest responsibilities, the most intense labors, and the most patient and painful endurance on the part of the military surgeons, we cannot separate without a formal and heartfelt recognition of the services of our brethren in the field and hospitals, who have been and are at this moment so nobly responding to all these demands—and while cherishing their immense and invaluable services as an honor to our profession, we commend these men and the memory of their deeds in the cause of science and patriotism, of civil government, of Union, of liberty, of humanity, to the gratitude of the country, whose life, as well as that of their heroic patients, they are laboring to preserve.

The Subject of Specialties.—Dr. Homberger, N. Y., offered a resolution for adoption, which had reference to defining the relations which should exist between specialists and general practitioners of medicine, and moved that the Association, in order properly to consider the matter, should resolve itself into a Committee of the whole.

The resolution was favored by Drs. Elsberg and Gardner, N. Y., Storer, of Boston, and others; but was lost, and a motion prevailed to lay it on the table, and have a special Committee of five appointed to report at the next meeting.

The usual resolutions of thanks to the President, Secretary, Committee of Arrangements, and others, were passed without comment.

Concerning Dr. Morton, the alleged Discoverer of Ether.—Dr. Henry D. Noyes, delegate from the New York Eye Infirmary, offered the following resolutions:—

Whereas, There is now pending in Congress an appropriation donating to Dr. W. T. G. Morton, of Boston, the sum of \$200,000, for his services in connection with the introduction of sulphuric ether as an anæsthetic agent; and

Whereas, The said Dr. Morton, by suits against charitable medical institutions for infringements of an alleged patent covering not only sulphuric ether, but the state of anæsthesia however produced, has placed himself beyond the pale of an honorable profession and of true laborers in the cause of science and humanity:

Resolved, That the American Medical Association enter their protest against any appropriation to the said Dr. Morton, because of his unworthy conduct, also because of his unwarrantable assumption of a patentable right to anæsthesia; and further, because private beneficence in Boston, New York, Philadelphia, and other places, has already sufficiently rewarded him for any claims which he may justly urge.

Resolved, That a copy of these resolutions be sent to the Chairman of the Committee of Ways and Means in the House of Representatives at Washington.

Dr. Mauran, of R. I., moved the adoption of the resolution, which motion was carried with but two or three dissenting voices.

The reports of the several Sections were, on motion, adopted.

Some unfinished business of minor importance was then disposed of, after which the Association adjourned to meet in Boston the first Tuesday in June, 1865.

During the session, the delegates were hospitably entertained at the residences of Drs. Jos. M. Smith, C. A. Budd, Isaac E. Taylor, Gordon Buck, Willard Parker, James Anderson, Alonzo Clark, Jared Lincolney, and Mayor Gunther.

On Thursday evening, the members visited the house and laboratory of Dr. Squibb, in Brooklyn, and were elegantly entertained. Notwithstanding the inclemency of the weather, a large number were present.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, JUNE 23, 1864.

THE NEW FEE-TABLE.—At the annual meeting of the Boston Medical Association, held May 2d, 1864, Drs. J. Mason Warren, George Bartlett, Charles E. Buckingham, George H. Gay, Charles D. Homans and James C. White were appointed a committee to revise the Rules and Regulations and the Fee-table of the Association, and to report upon the same at a special meeting. At the adjourned meeting, held Monday, June 13th, the following report was presented by the Committee and unanimously adopted:—

REPORT.

In pursuance of their duty, your committee would briefly refer to some of the successive phases through which the Fee-table has passed during the past seventy or eighty years. In 1788, as stated in the letter appended to the Rules and Regulations, the fee for an ordinary visit was four shillings, which in 1800 was raised to one dollar. In 1808 it was again raised to one dollar and a half, with the right reserved to the practitioner to make a discount of one third in cases of necessity. Thirteen years ago it was raised again to two dollars, but

in view of the fact that such a fee would be beyond the means of many patients to pay, a sliding scale was adopted, by which it was provided that, in such cases, a minimum fee might be charged of one dollar: it was also further provided that, "in every case, in settling his account, the practitioner might make any deduction which he conscientiously believed that the circumstances of the patient rendered necessary."

It is now thought necessary, in view of the recent great increase in the expenses of living, that the fee be again raised, making it three dollars instead of two, subject as heretofore to any deduction which may be rendered necessary by the pecuniary circumstances of the patient. It has been thought best to substitute a single fixed fee for the visit for the sliding scale adopted in the last Fee-table, for reasons which have been fully discussed at the annual meeting.

For each visit, either medical, surgical or obstetrical, in cases of regular attendance, \$3.00

For the first visit in a new case, it shall be considered proper to make a charge of from three to five dollars, and a similar charge should be made in cases in which but a single visit is required. In cases also of extraordinary service, detention, or attendance, or when, for any reason, the case is one of unusual importance or responsibility, the charge should be proportionally increased; and the duty to make such increased charge shall be considered obligatory upon the practitioner.

For a visit in consultation, from 5.00 to 10.00

In case of a consultation, the attending physician may also charge the usual consultation fee instead of the fee for an ordinary visit. For each subsequent visit in consultation, where the attendance is continuous, the fee may be from three to five dollars.

For a visit after 9 P.M., and before 8 A.M., from 5.00 to 10.00

In cases of consultation or other extraordinary attendance in the night, the fee for such extra attendance shall be added to that for a night visit.

For attendance involving travel out of town, mileage shall be charged at a rate per mile, for short distances, of from 1.00 to 2.00

In cases of longer distances, travelled by railroad, the mileage may be reckoned according to the time saved to the practitioner, at from half a dollar to a dollar.

For advice at the physician's house, according to the importance of the case, unseasonableness of the hour, or time occupied, from 3.00 to 20.00

For a letter of advice, according to the importance of the case, or the time occupied, from 10.00 to 20.00

For an opinion involving a question of law in which the physician may be subpoenaed, 50.00

The above charge shall also be allowed in cases in which the physician is subpoenaed in consequence of an opinion obtained under any other pretext, but which is afterwards sought to be introduced as evidence in a suit or action. Also for attendance in court as an expert.

In case of an opinion involving special study or experimental investigation, such additional service shall be charged in proportion to the time and labor expended.

In case of detention in court as an expert, or in a matter involving a professional opinion, for each day's attendance after the first, the fee shall be fifty dollars.

For a certificate of health,	5.00
For a post-mortem examination in a case of legal investigation,	50.00
For do. made at the request of the family or relations of the deceased,	20.00
For vaccine inoculation,	5.00

It is recommended that in the treatment of gonorrhœa or syphilis, the first charge shall be from five to ten dollars, the subsequent charges to be as in cases of ordinary attendance or advice.

Midwifery.

For attendance during labor in the day time,	20.00
For do. if any part of the attendance is in the night,	30.00

For attendance during tedious labor, it shall be considered obligatory to make such additional charge as, in the discretion of the practitioner, the extraordinary detention or service shall seem to demand.

Obstetric operations, when necessary, shall be charged in addition to the usual fee for attendance.

In obstetrical practice all subsequent visits shall be charged as in ordinary cases of attendance.

In cases of labor when the child is born, but not the placenta, before the arrival of the accoucheur, the whole fee is to be charged. When both the child and placenta are born before the arrival of the accoucheur, half or the whole fee may be charged, according to circumstances. This rule is intended to apply to cases in which the services of the accoucheur have been previously engaged, and in which the delay does not arise from his fault.

If, in any case of labor, a second physician is called in consultation, and subsequently detained in joint attendance, both attending and consulting physicians shall be entitled to the full fee for attendance, and also to such additional amount as may be deemed proper in view of the importance of the case, the unseasonableness of the hour, or any extraordinary detention, or service rendered.

Operative Surgery.

For capital operations, or operations of unusual difficulty, such as amputations of large limbs, ligation of large arteries, operations for stone in the bladder, removal of breasts or of other large tumors, operations for cataract, for strangulated hernia, for vesico-vaginal fistula, for cleft palate, etc., 100.00 to 500.00
according to the importance of the case and the pecuniary circumstances of the patient.

For operations of secondary importance or difficulty, such as operations for fistula in ano, for hare-lip, for the radical cure of hydrocele, tapping and injection of ovarian cysts, reduction of dislocations or fractures of large bones, amputation of fingers or toes, tracheotomy, removal of small tumors not involving important organs, passing catheter in cases of obstruction, ligation of arteries of secondary size, etc., 25.00 to 100.00

For minor operations, such as excision of tonsils, removal of nasal polypi, tapping for hydrocele or for ascites, opening abscesses, catheterism, stitching recent wounds, cupping, passing setons, excision of wens, etc., 5.00 to 25.00

After surgical operations, all subsequent visits shall be charged as in ordinary cases of attendance.

The provisions of the new table are to take effect after July 1, 1864.

It was also voted to print the Report, together with a list of the members of the Association, in a pamphlet form for distribution.

AN ASSOCIATION OF AMERICAN OPHTHALMIC SURGEONS.—In accordance with arrangements previously made, a convention of gentlemen devoted to ophthalmological science and practice was held at the New York Eye Infirmary during the recent meeting of the American Medical Association—Dr. Delafield of New York presiding, and delegates being present from various parts of the United States.

Communications were read by Drs. Dix of Boston and Bumstead of New York, followed by discussion.

A sample of a considerable quantity of the Calabar bean (*Physostigma venenosum*), imported by Harris & Chapman, of Boston, was exhibited, and remarks as to its therapeutic value and effects were made by several members.

A Constitution and By-Laws, prepared by a committee appointed for that purpose, were adopted, and the assembly constituted itself the American Ophthalmological Association.

The organization was subsequently completed by the election of Dr. Edward Delafield of New York, as President, and Drs. Henry D. Noyes and Herman Althof of New York, as Secretaries.

Dr. Delafield, distinguished as having been for so long a period at the head of the ophthalmic surgeons of our country, in doing the Society the honor of accepting its presidency, expressed his hearty sympathy and concurrence in the objects of the Association, to contribute to the advancement of ophthalmic science by a comparison of experience and interchange of opinions among its members.

It was voted to hold the first Annual Meeting in the city of New York on the second Tuesday of June, 1865.

Between the sessions of the Association the members enjoyed the privilege of examining cases and witnessing operations in the spacious and well-arranged wards of the Infirmary.

In the evening, after the adjournment, by invitation of Dr. Noyes, one of the active members of the Committee of Organization, the members re-assembled at his house; and, after a felicitous welcome from their host, spent some hours in the cultivation of an agreeable personal intimacy.

HARVARD UNIVERSITY. NEW PROFESSORSHIP.—It will be gratifying to all interested in medical education and the College, to learn that a professorship of the Physiology and Pathology of the Nervous System has been established by the Corporation, and that the greatest teacher in this branch of medicine of the day, Dr. E. Brown-Séquard, has been appointed to fill the Chair. This distinguished physiologist has, we are pleased to say, left London and fixed his residence permanently among us. We doubt not that this addition to the many advantages now offered by the medical faculty of the University, will be duly appreciated by students from all parts of the country in selecting their winter course of lectures.

MASSACHUSETTS GENERAL HOSPITAL.—The following changes have been made in the medical staff of this Institution. Dr. Bowditch, after a long and honorable term of service, has resigned his position of visiting physician, and Dr. Calvin Ellis, Adjunct Professor of the Theory and Practice of Medicine, has been appointed to fill the va-

cancy. It will be needless to say how much Dr. Bowditch will be missed, for few of the many who have received clinical instruction from him in their student days will forget the lessons, not only of skill, but of humanity, he taught, and how entirely the patients were made to feel that they could command his heart as well as his experience. Dr. Ellis has been connected with the Hospital for several years as pathologist, and we are glad to announce that the Trustees have advanced him to a place for which he is equally well fitted.

Dr. Brown-Séquard has also been appointed one of the consulting board of the Hospital.

AN AFRICAN BELLE.—After a long and amusing conversation with Rumanika in the morning, I called on one of his sisters-in-law, married to an elder brother, who was born before Dagara ascended the throne. She was another of those wonders of obesity, unable to stand, excepting upon all fours. I was desirous to obtain a good view of her, and actually to measure her, and induced her to give me facilities for doing so by offering in return to show her a bit of my naked legs and arms. The bait took as I wished it, and after getting her to sidle and wriggle into the middle of the hut, I did as I promised, and then took her dimensions as follows:—Round the arm, 1 foot 11 inches; chest, 4 feet 4 inches; thigh, 2 feet 7 inches; calf, 1 foot 8 inches; height, 5 feet 8 inches. All of these are exact except the height, and I believe I could have obtained this more accurately if I could have had her laid on the floor. Not knowing what difficulties I should have to contend with in such a piece of engineering, I tried to get her height by raising her up. This, after infinite exertions on the part of us both, was accomplished, when she sank down again, fainting, for her blood had rushed into her head. Meanwhile, the daughter, a lass of sixteen, sat stark-naked before us, sucking at a milk pot, on which the father kept her at work by holding a rod in his hand; for, as fattening is the first duty of fashionable female life, it must be duly enforced by the rod if necessary. I got up a bit of flirtation with missy, and induced her to rise and shake hands with me. Her features were lovely, but her body was as round as a ball.—*Speke's Africa.*

In a graceful human step the heel is always raised before the foot is lifted from the ground, as if the foot were a part of a wheel rolling forward; and the weight of the body, supported by the muscles of the calf of the leg, rests for the time on the fore part of the foot and toes; there is such a bending of the foot in a certain degree. But when strong wooden shoes are used, or any shoe so stiff that it will not yield and allow the bending of the foot, the heel is not raised at all until the whole foot rises with it; so that the muscles of the calf are scarcely used, and, in consequence, soon dwindle in size and almost disappear. Many of the English farm servants wear heavy, stiff shoes; and in London it is a striking thing, to see the drivers of country wagons with fine robust persons in the upper part, but with legs that are fleshless spindles, producing a gait which is awkward and unmanly. The brothers of these men, who are otherwise employed, are not so misshapen. What a pity that, for the sake of a

trifling saving, fair nature should be thus deformed! An example of this kind is seen in Paris; there, as the streets have few or no side pavements, and the ladies have to walk almost constantly on tiptoe, the great action of the muscles of the calf has given a conformation of the leg and foot to match which the Parisian belles proudly challenge all the world—not aware, probably, that it is a defect in their city to which the peculiarity in their limb is in part owing.—*Scientific American*.

THE INDIANA STATE MEDICAL SOCIETY met at Indianapolis on the 17th of May, and the annual address was delivered by Dr. Moffat, of Rushville. A paper read by Dr. Rooker, of Castleton, on the prevailing epidemic, "spotted fever," elicited considerable discussion. Dr. S. M. Linton, of Columbus, was elected President; Dr. W. Lockhart, Vice President; Dr. W. M. Harvey, Secretary; Dr. W. P. Parr, Assistant Secretary; Dr. R. N. Todd, Corresponding Secretary; and Dr. J. H. Woodburn, Treasurer. A fine entertainment was given to the State Society, on the evening of the second day, by the Indianapolis Medical Association.

DR. THEOPHILUS PARVIN, recently elected Professor of Materia Medica in the Medical College of Ohio, is to spend some months in Europe the present season—mostly in the city of Edinburgh.

THE building heretofore used by the Eclectic Medical College at Worcester, Mass., is to be converted into a U. S. General Hospital for sick and wounded Massachusetts soldiers.

THE REPORT OF THE CONFEDERATE STATES SURGEON-GENERAL, for the months of January, February and March, shows that the number of cases of disease among the Union prisoners in Richmond during that time was 2,779; number of deaths, 1,396. No less than 708 of the deaths were caused by chronic diarrhoea.

DR. L. KROMBEIN reports, in the *Buffalo Medical and Surgical Journal*, two fatal cases of trichiniasis, which have recently occurred in a town near Buffalo. A specimen of muscle from the persons after death, and of sausages partaken of by them some weeks previously, showed the trichina spiralis in great abundance, and left no doubt of the cause of the disease.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, JUNE 18th, 1864.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	43	45	88
Ave. mortality of corresponding weeks for ten years, 1853—1863,	34.9	31.5	66.4
Average corrected to increased population	00	00	73.00
Death of persons above 90	0	1	1

DEATHS IN BOSTON for the week ending Saturday noon, June 18th, 88. Males, 43—Females, 45.—Accident, 3—apoplexy, 3—disease of the bladder, 1—inflammation of the bowels, 2—disease of the brain, 3—bronchitis, 2—burns, 1—carcinoma, 1—cholera infantum, 1—cholera morbus, 1—consumption, 16—convulsions, 2—croup, 2—debility, 1—diarrhoea, 1—diphtheria, 4—dropsy of the brain, 3—drowned, 1—erysipelas, 1—remittent fever, 1—scarlet fever, 1—typhoid fever, 3—gangrene, 1—disease of the heart, 3—malformation of the heart, 1—infantile disease, 4—disease of the liver, 1—inflammation of the lungs, 2—marasmus, 2—measles, 3—old age, 4—paralysis, 2—premature birth, 1—smallpox, 3—spina bifida, 1—syphilis, 1—inflammation of the throat, 1—unknown, 6—wound (gunshot), 1.

Under 5 years of age, 34—between 5 and 20 years, 11—between 20 and 40 years, 22—between 40 and 60 years, 11—above 60 years, 10. Born in the United States, 62—Ireland, 20—other places, 6.